

Remarks

Claims 1-3 and 5-31 are now pending in this application. Applicants have amended claims 1, 11, 21 and 23, added new claim 31 and cancelled claim 4 to clarify the present invention. Applicants respectfully request favorable reconsideration of this application.

Applicants have amended the specification to correct the formula on page 3, line 17. Accordingly, Applicants respectfully request withdrawal of the objection to the disclosure.

The Examiner rejected claims 4 and 11 under 35 U.S.C. § 112, second paragraph. Claim 4 is no longer pending. Subject matter of claim 4 has been incorporated into claim 1 and the language identified by the Examiner no longer appears. The language in claim 11 identified by the Examiner is no longer present in claim 11. Applicants have added claim 31 to cover the embodiment covered by the alternative language deleted from claim 11. In view of the above, Applicants submit that all pending claims comply with 35 U.S.C. § 112, second paragraph and respectfully request withdrawal of this rejection.

The Examiner rejected claims 1, 2, 14, and 20 under 35 U.S.C. § 102(b) as being anticipated by EP 402 606 to Rahman et al. The Examiner rejected claims 3-13, 15-19, and 21-30 under 35 U.S.C. § 103(a) as being unpatentable over Rahman et al. in view of U.S. patent 2,134,825 to Hill et al.

Rahman et al. does not disclose the present invention as recited in claim 1 since, among

other things, Rahman et al. does not disclose a method for manufacturing cellulose carbamate that includes subjecting a mixture including cellulose, a liquid, the auxiliary agent, and urea to mechanical working, thereby at least partially performing at least one of enhancing absorption of the auxiliary agent and urea up to the core of the cellulose or performing a reaction between cellulose and urea. Rather, Rahman et al. discloses a conventional process for manufacturing cellulose carbamate, which includes using an alkaline solution for swelling the pulp (mercerization) and treating the pulp in a urea solution after the mercerization. The mixture, or slurry, contains a huge amount of water. The slurry is then dried partly by compressing and heating before the reaction between urea and the pulp is carried out in an oven.

The drying step before the oven is necessary, because the liquid content of the mixture is high. The excess liquid has to be removed by mechanical pressing before the oven according to the method disclosed by Rahman et al. In the method according to the invention as recited in claim 1, the reaction between cellulose and urea is caused partly by mechanical working and the additional water removal before the oven is not needed. The reaction between urea and cellulose by using mechanical working works with mixtures that have a high dry matter content, thus the conventional slurry masses cannot be handled by mechanical working.

In view of the above, Rahman et al. does not disclose all elements of the present invention as recited in claim 1 and claims 2, 14, and 20, which depend from claim 1. Since Rahman et al. does not disclose all elements of the present invention as recited in claims 1, 2, 14, and 20, the present invention, as recited in claims 1, 2, 14 and 20, is not properly rejected under 35 U.S.C. § 102(b). For an anticipation rejection under 35 U.S.C. § 102(b) no difference may exist between the

claimed invention and the reference disclosure. *See Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q. 841 (C.A.F.C. 1984).

Along these lines, anticipation requires the disclosure, in a cited reference, of each and every recitation, as set forth in the claims. *See Hodosh v. Block Drug Co.*, 229 U.S.P.Q. 182 (Fed. Cir. 1986); *Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir. 1985); *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986); and *Akzo N.V. v. U.S. International Trade Commissioner*, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986).

The combination of Rahman et al. and Hill et al. does not suggest the present invention as recited in claims 3-13, 15-19, and 21-30, which depend from claim 1, since, among other things, the combination does not suggest a method for manufacturing cellulose carbamate that includes subjecting a mixture including cellulose, a liquid, the auxiliary agent, and urea to mechanical working, thereby at least partially performing at least one of enhancing absorption of the auxiliary agent and urea up to the core of the cellulose or performing a reaction between cellulose and urea. Rather, both Rahman et al. and Hill et al. suggest conventional process for manufacturing cellulose carbamate, which includes using an alkaline solution for swelling the pulp (mercerization) and treating the pulp in a urea solution after the mercerization. The mixture, or slurry, contains a huge amount of water. The slurry is then dried partly by compressing and heating before the reaction between urea and the pulp is carried out in an oven. Unlike Rahman et al., Hill et al. suggests swelling the pulp with hydrogen peroxide with and without sodium hydroxide.

Unlike conventional method suggested by Rahman et al. and Hill et al., according to the present invention as recited in claim 1, a mixture of chemicals and cellulose is subjected to mechanical working. A reaction between urea and cellulose can be started and performed, at least partly, already in a mechanical working device. The reaction between cellulose and urea is caused partly by mechanical working and additional water removal before the oven is not needed. The reaction may be completed in an oven. According to the method of the present invention as recited in claim 1, cellulose can react with an auxiliary agent and urea at a high dry matter content. Because of this, the mixture can, after the mechanical working, be transferred directly to the reaction step to the oven without drying in an intermediate step. According to conventional methods, the drying step before the oven is always necessary, because the liquid content of the mixture is high. The excess liquid has to be removed by mechanical pressing before the oven in the conventional methods.

In view of the above, the combination of Rahman et al. and Hill et al. does not suggest the present invention as recited in claims 3-13, 15-19, and 21-30, which depend from claim 1.

In view of the above, the references relied upon in the office action, whether considered alone or in combination, do not disclose or suggest patentable features of the present invention. Therefore, the references relied upon in the office action, whether considered alone or in combination, do not anticipate the present invention or make the present invention obvious. Accordingly, Applicants respectfully request withdrawal of the rejections based upon the cited references.

In conclusion, Applicants respectfully request favorable reconsideration of this case and early issuance of the Notice of Allowance.

If an interview would advance the prosecution of this application, Applicants respectfully urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge fee insufficiency and credit overpayment associated with this communication to Deposit Account No. 22-0261.

Respectfully submitted,

Date:

6/9/06



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